

Applicant: Halliburton
Appl. No. 10/542,402

Amendments to the Drawings:

Please amend the drawing to include the following new sheet depicting Fig 8a.

REMARKS

This paper responds to the Office action dated December 29, 2006.

Request for One-Month Extension

The Applicant requests a one-month enlargement of time in which to file the present response. Please charge our Deposit Account No. 22-0261 an amount of \$60.00 reflecting the fee for a small entity that is required to effect this extension. If the Commissioner finds that additional fees are required to effect this extension, he is hereby authorized to charge such fees to Deposit Account No. 22-0261.

Response to the objection to the Drawings

In the Office Action the Examiner has objected to the drawings because they do not show the encoded motor shaft elements which are recited in Claim 11. In response to the objection to the drawings, the Applicant files herewith a new informal drawing Fig. 8a. As set forth in the specification at page 14, line 32 through page 15 line 10, the Applicant disclosed an alternative embodiment of the invention wherein conventional DC motors with encoded shafts could be substituted for the stepper motors of a first embodiment. New drawing Fig. 8a is identical to FIG. 8 except with respect to the schematic identification of the three DC motors X, Y and Z and the optical readers that create a signal to the CPU. It is submitted that in view of the written disclosure in the original specification, the new schematic drawing does not constitute new matter. The Applicant has also amended the specification to refer to the new Fig. 8a. It is submitted that this amendment does not constitute new matter in view of the disclosure in the original specification.

The Rejections to the Claims

In the Office Action, the Examiner has indicated that Claims 1-7 are allowable and has rejected claims 8 under 35 U.S.C § 102 in view of the Patent to Reis, U.S. No. 5,415,417 (Reis), and claims 9-10 under 35 U.S.C. § 103(a) in view of the patent to Shoemaker, U.S. No. 5,967,892 (Shoemaker). The Examiner has also objected to claim 11 as being dependent on a rejected base claim.

The Applicant has withdrawn claim 8 in response to the rejection.

Claims 9 and 11 have been amended to improve the clarity of the language and remove ambiguity.

Claims 9-10 have been rejected under 35 U.S.C. § 103 in view of the patent to Shoemaker. The Shoemaker patent discloses a game, like a crane game, but uses a video camera rather than an engagement device. Shoemaker's camera detects a particular object or target that is positioned directly below the camera. The position of the camera may be controlled by the player on an x and y axis. Shoemaker discloses that the location of the camera may be detected by one of three alternative methods:

(1) detection by sensors to detect the head, including a technique wherein the sensor itself detects an image that is directly below the camera and the location of the image is then presumably looked up by the CPU. See Column 13, lines 30 et seq.; Column 7, lines 15-43.

(2) detection by contact with the surface of a "touch screen." See column 7 lines 43-50 Column 11, lines 26-36, see also Column 13 lines 48-46-60,

(3) detection by a series of optical emitters wherein the head of the camera interferes with

the grid created by infrared light emitters and the interruption of the beams is detected. See Column 11, line 36-45.

Thus each of the detection methodologies contemplated by Shoemaker is different from those disclosed by Applicant.

In connection with Claim 10, it is submitted that Shoemaker does not disclose or suggest that the use of stepper motors to provide information relating to the position of an engagement element. (Shoemaker discloses the use of a video camera that is substituted for the "engagement element.") Shoemaker discloses the use of conventional DC motors which are controlled by the controller. See Column 12 lines 27-67. It is apparent that Shoemaker does not suggest using stepper motors that can provide an input feedback signal to the processor which can then be processed to determine the location of the engagement element (or in Shoemaker's case, the video camera) or a CPU and stepper motor that can directly track the number of steps that a stepper motor has taken (either forward or reverse).

While the Examiner suggests it would have been obvious to substitute the use of stepper motors for conventional DC motors, it is submitted that Shoemaker was faced with the same problem as the inventors and rather than select the use of stepper motors resorted to complex and costly manners in which to track the location of the head. Moreover, at the time of the invention, it is submitted that the use of stepper motors in cranes was not known or a common technology that was used. DC motors had been used in cranes for many years and, despite the availability of stepper motors, on information and belief, no one had employed them. On information and belief, the detection of the location of the head or engagement element was not a

particular concern. In conventional cranes, if a prize was won by the player, it could be detected in the prize dispensing area. On information and belief, with conventional cranes there was no appreciation of a need to determine the position of the respective engagement elements.

The video crane of Shoemaker was unique with respect to crane games because it did not physically engage prizes and move them to a dispensing location. Likewise, one skilled in the art would have not thought to substitute the various detection modes of a video crane to a conventional crane. There was simply no recognized need to detect the location of the engagement elements. It is submitted that without the benefit of hindsight of the invention, there was simply no reason and no motivation to employ a system on conventional cranes that would track the location of the engagement elements. It was the Applicant that first appreciated a number of advantages of using this information in connection with conventional cranes. For example, this information can be used to determine when to elevate the play field because the distance of the drop of the engagement element on the Z axis may be measured. If the distance of the drop exceeds a predetermined distance, the play field can be programmed to be elevated. See page 8, lines 6-13; page 16, lines 11-17. As an alternative, a signal may be sent to the game owner or operator that it is time to replenish prizes. In addition, using the location of the engagement elements can allow the CPU to operate in the "fluff mode" or maintenance mode which was described in the specification wherein the engagement elements are systematically positioned over the play field at predetermined locations and allowed to drop down, engage the prizes, lift and then release. See page 4 column 13-21; page 17, lines 14-26. This fluffing operation also serves as an attract mode because it shows the engagement elements picking up

and dropping prizes which may appeal to prospective customers.

For the foregoing reasons, it is submitted that it would not have been obvious to substitute the detection concepts disclosed by Shoemaker in a conventional mechanical crane device and therefore Claim 9 should be allowed.

Finally, it is noteworthy that while Shoemaker disclosed a number of manners in which to detect the location of his video camera (which is synonymous with the claimed engagement element) and thus understood or appreciated a similar problem addressed by the Applicant -- namely -- how to detect the location of the engagement elements -- he did not suggest the alternative manners that were disclosed and claimed by the Applicant (stepper motors and encoded shafts). Moreover, the Applicant's detection methods are more accurate and less costly than the detection methods disclosed by Shoemaker. It is therefore submitted that Shoemaker can be considered to teach away from the Applicant's invention. In summary, the use of stepper motors in connection with the claimed device contributes to a number of new and inventive features in connection with crane games and it is submitted that Shoemaker's invention does not render the claimed invention obvious.

Conclusion


Wherefore, it is submitted that each of the objections and issues has been addressed and the case is now in condition for allowance. If the Examiner believes, for any reason, that

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personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Respectfully submitted,

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